

by Schory on the left. The avalanche caught Whitney and Logatto near the top of the slope, and Starr and Schory farther down.

Schory grabbed a tree and was not buried, but lost some of his equipment. The three guests were partly buried and injured. They sustained broken ribs, tibias, a damaged knee and a back injury. The other four skiers in the party were east of the avalanche and were not caught.

Rescue

Schory immediately radioed the Powderbird Guides base area, notifying them of the accident. The radio call set the rescue in motion, and Alta Central, communications center for the Cottonwood Canyons, noted the call at 1012. At the accident site, a beacon and surface search was started immediately. After 2 or 3 minutes, everyone was accounted for: Starr was on her side, buried to the shoulders; Logatto was on his side wrapped around two small trees with his arm exposed; and Whitney was in a sitting position, facing downhill and buried to the waist.

At 1015, a helicopter deposited two Snowbird patrollers at the avalanche. At 1027 a medical doctor, equipment, and a third Snowbird patroller arrived by helicopter to treat the injured skiers. At 1046, another helicopter arrived at the accident site and flew one of the injured to the landing pad at the mouth of the canyon where the sheriff transported him to the hospital. By 1053, the Life Flight helicopter arrived at the accident site and took the second person to a Salt Lake City hospital. The third person was evacuated by helicopter at 1114, and the rescue was concluded by noon.

Avalanche Data

The first avalanche, triggered by Schory, was classified as an SS-AS-2 and was 150 feet wide by 300 feet vertical. The second avalanche, which shared a common flank and crown face with the first avalanche, was classified SS-AS-3. Both fractures were 2 feet deep. The second avalanche was 250 feet wide, running 400 vertical feet.

The starting zone faces north, lies at an elevation of 10,400 feet, and has a slope angle of 36°. The slope is concave with scattered trees.

The slab consisted of new snow, equilibrium (rounded) snow, and windslab. Underlying the slab were 2 inches of small-grained kinetic (faceted) grains, above a .5-inch layer of kinetic grains which had bonded

together to become a melt-freeze crust. Under the crust was a .5-inch thick layer of poorly bonded kinetic grains. The bed surface of the avalanche was below these thin layers, a 1-inch-thick layer of faceted grains, resting on 2 feet of advanced, moist depth hoar to the ground.

Comments

Even though Schory was an experienced guide familiar with the local snowpack and terrain, an avalanche accident occurred based on the assumption that the snow was stable. The avalanche hazard was rated low-to-moderate, but the presence of weak, faceted-snow layers in the snowpack contributed to deep slab instability. Although the slope had been shot with explosives the day before, the area that eventually avalanched had not been skied. The avalanche did, however, take out some of the tracks from the previous day.

Slope stability is not always achieved with explosives or ski pressure. Weaknesses within the snowpack are distributed randomly across the slope as a result of differences in snow structure and localized stresses from terrain and vegetation features. In this story, however, a small slab had just been released by ski-cutting which was a good clue to the avalanche potential in the surrounding area. Schory appropriately redirected the group toward the right where there had been ski pressure the previous day, and where the slope was presumably safer. It appears that when Logatto went to help Whitney, their combined weight was too much for the snowpack to bear. The slab failed and avalanched, which is not surprising given the weak snowpack structure on this steep slope.

Finally, all of the guests were wearing avalanche transceivers which was good. Their guide, however, was the only one carrying a shovel. Even though this is common practice with many helicopter and snowcat skiing operations, one can only speculate the outcome of an accident if the guide, along with the only radio and shovel, becomes buried too. Transceivers are of little help without a shovel to uncover the victim once located. (See related stories where shovels were not available: 80-10, 82-8, 82-13, 82-21, and 83-3.)

